

WE CLAIM

1. A video information processing apparatus for selecting a representative  
5 video image from a group of video images in dependence upon a frequency of  
occurrence of a plurality of possible values of at least one image property, said  
processing apparatus comprising:

(i) an image data accumulator for calculating the frequency of occurrence of said plurality of values of said image property for each frame of said group;

10 (ii) a representative frequency calculation module for calculating a representative frequency of occurrence for each of said plurality of possible values of the image property wherein said representative frequency is calculated with respect to said group of video images;

(iii) a representative video image extractor for selecting said representative  
15 video image by selecting an image of said group which has a frequency of occurrence  
of said plurality of possible values close to said representative frequency of  
occurrence.

2. An apparatus according to claim 1 wherein said representative frequency is  
20 an average frequency.

3. An apparatus according to claim 1 wherein said image property is a colour property.

25           4. An apparatus according to claim 1 wherein said colour property is a hue  
signal.

5. An apparatus according to claim 1 wherein said possible values includes a full range of possible values of said image property.

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6. An apparatus according to claim 1 wherein each one of said possible values comprises a predetermined range of values of said image property.

7. An apparatus according to claim 6 wherein said predetermined ranges for said possible values are contiguous ranges each having identical span and said ranges cover said full range of possible values of said image property such that a histogram of said frequency of occurrence is formed for each of said images.

8. An apparatus according to claim 1 wherein said plurality of values comprises an image property value for each pixel of said respective image.

9. An apparatus according to claim 1 wherein said representative video image extractor is operable:

(i) to calculate a difference between said representative frequency of occurrence and said frequency of occurrence for each of said plurality of possible values;

(ii) to combine said values of said difference for each of said plurality of possible values to produce one single-valued difference for each image; and

(iii) to select said representative video image by selecting an image in said group of images which corresponds to said smallest of said single-valued differences.

10. An apparatus according to claim 1 wherein said representative video image extractor is operable:

(i) to calculate a difference between said representative frequency of occurrence and said frequency of occurrence for each of said plurality of possible values;

(ii) to combine said values of said difference for each of said plurality of possible values to produce one single-valued difference for each image; and

(iii) to select said representative video image by selecting an image in said group of images which corresponds to a single-valued difference that lies below a predetermined threshold .

11. An apparatus according to claim 4 comprising a format conversion unit for converting from a video signal in an arbitrary colour space to a video signal in said hue-saturation-value colour space.

5           12. An apparatus according to according to claim 11 comprising a user control for performing shot and sub-shot segmentation operations during recording of said video images.

10           13. A video information processing method for selecting a representative video image from a group of video images in dependence upon a frequency of occurrence of a plurality of possible values of at least one image property, said processing method comprising the steps of:

- (i)       calculating said frequency of occurrence of said plurality of values of said image property for each frame of said group;
- 15       (ii)     calculating a representative frequency of occurrence for each of said plurality of possible values of said image property wherein said representative frequency is calculated with respect to said group of video images;
- 20       (iii)    selecting said representative video image by selecting an image of said group which has a frequency of occurrence of said plurality of possible values close to said representative frequency of occurrence.

14. Computer software having program code for carrying out a method according to claim 13.

25           15. A data providing medium by which computer software according to claim 14 is provided.

16. A medium according to claim 15, said medium being a transmission medium.

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17. A medium according to claim 15, the medium being a storage medium.